

Key Words in Instruction

Wikis and Collaborative Inquiry

by Annette Lamb and Larry Johnson

From exploring electronic databases to copying from *Wikipedia*, most students rely on the Internet for information. But, how many of these students really understand the origin of this information or the collaborative process used to create these pages?

Wikis Defined

Wikis are simply Web sites that provide easy-to-use tools for creating, editing, and sharing digital documents, images, and media files. Multiple participants can enter, submit, manage, and update a single Web workspace creating a community of authors and editors.

Wiki projects help young people shift from being *consumers* of the Internet to *creators* on the Web. Open-editing wiki tools engage students in exciting collaborative learning experiences that promote reading, writing, and high level thinking across content areas and grade levels. Wikis are a quick and easy way to energize reluctant learners, promote group synergy, and encourage authentic learning.

The *Home of Sylvie* wiki traces a Coho salmon, whose life story has been dramatized by the fourth and fifth graders of Harborview Elementary School (<http://anadrama.wikispaces.com/>). Students learned about the salmon and created a fact-based wiki in collaboration with community members.

While some projects are text-based, many incorporate a wide range of media including images, audio, video, and animation. *The Voices of the World* wiki involves participants in sharing ideas and information each month during the school year (<http://votw.wikispaces.com/>). Students exchange information about their countries, cultures, and varied languages through various media.

Wikis can be differentiated from other Web development software by their collaborative features including membership options, discussion tools, and history functions.

Membership options. Most wiki tools allow the Web site to be public, protected, or private. Public wikis can be viewed and edited by anyone. Protected wikis can be viewed by all users but only edited by members. Private wikis can only be viewed and edited with permission. Participants should select the best approach for their particular collaboration. For instance, an elementary class may become members of a protected wiki, while members of a community project might make their wiki public. Participants may choose to be notified of updates to monitor project progress.

Discussion tools. Many wiki spaces provide a discussion tab or comment option. In a collaborative environment, these tools can be used to provide feedback, note a connection, or explain changes that have been made to a page. These tools can be used to hold book discussions, to critique materials, or to vote for favorite content.

History functions. Additions and changes to wiki pages can be tracked using the history tools. This option is particularly useful in assessment. The contributions and comments made by each student can be viewed.

Successful Wiki Projects

Wikis provide new opportunities for students to share their findings. When studying Greek mythology, young people might read a classic such as *D'Aulaire's Book of Greek Myths* or the popular *Percy Jackson & the Olympians* series. Rather than simply writing a summary or taking a test, the content in social studies and language arts classes could be combined to address *AASL Standards for the 21st-Century Learner* and create a high impact learning experience.

Sixth grade students in southern Illinois collaborated on a project related to *Greek Mythology* wiki (<http://mra-ancient-greece.wikispaces.com/>). Their mission was to select a successor to Zeus's throne. After selecting a Greek god or goddess to nominate, students used Paint software to create a symbol representing their candidate. They also created informational wiki pages for their nominee and edited the pages of their peers (see Figure 1). Students were encouraged to read and link to peer postings. Pages were also created for fictional political parties where political posters and audio campaign ads were published. The six finalists took on the role of their god and participated in interviews using the "discussion" tab in the wiki. Finally, students voted on Zeus's successor. Using the "history" tab, the teacher was able to trace student writing and editing activities.

When working with wikis in teaching and learning, there are many options. Students can join an existing project, use another project as a model, or start one. Students can work independently, link to each other, peer edit, comment, and/or work collaboratively.

What Makes a Successful Wiki?

Unique Content. Why recreate the Web? The key to a successful wiki is identifying and filling a niche need. What can be created or organized that isn't available elsewhere? For example, a wiki can be based on one of the following topics:

- ▶ a small town or community without a Web site
- ▶ an interesting historical building, location, or event
- ▶ a lesser-known, regional, or noteworthy person
- ▶ oral histories or memories of a particular shared experience—an event that may have been overlooked by other Web sites
- ▶ an invented world or fictional work
- ▶ thematic resources for literature circles or book clubs with a unique focus

Structure. A project may quickly fizzle without good organization. An effective wiki makes good use of hyperlinks to connect information and ideas. Rather than one long page or a series of unrelated Web pages, a quality wiki provides an intuitive way to explore information. One idea is linked to another so that people can see the forest and the trees. Consider these factors for a wiki structure:

- ▶ How will people see the “big pic-

ture,” but also understand all the elements?

- ▶ How can information be shared in an appealing, organized way?
- ▶ How can a consistent structure be developed through agreed upon guidelines?
- ▶ How can many people contribute while maintaining a sense of shared voice?

Flexibility. A well-designed wiki has both structure and flexibility. A wiki should not be started with all the information already in place. If it's complete, then why not just create Web pages? One of the best things about wikis is their versatility. Incomplete information or the beginning of an idea is viewed by the wiki community as an opportunity for another participant to contribute rather than seen as an omission. Although structure is important, it must be balanced with the opportunity to expand and dig deeper into the content. For instance, a wiki can be started about favorite illustrators. It can then be added to, developed, and refined over time. Or, a wiki about a new park project might detail the plants found in the park, leaving year two for the animals, and year three for the geologic features.

Synergy. When people work together toward a joint goal, the result is often more comprehensive than when individuals work independently. Although

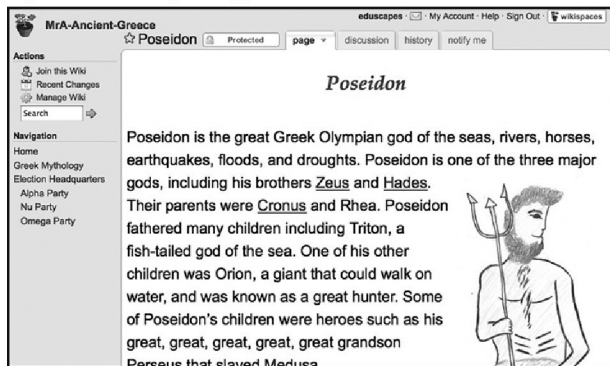
wikis work fine with small groups, larger projects require more commitment by individual group members or a larger writing pool. Contributors to wikis can be expanded to students or community members representing:

- ▶ Other class periods, schools, or countries
- ▶ Different age groups—young and old
- ▶ Varied perspectives, experiences, or points of view
- ▶ Different geographic areas
- ▶ Varied cultures
- ▶ Different academic fields

Enthusiasm. When engaging teen learners in a class project, it's important that the project provides a high level of interest. Participants need to be passionate about the content or the project activities will quickly become a chore rather than a quest for knowledge. One way to maintain enthusiasm is through questioning. Consider some of the following questions:

- ▶ What questions do we have about this topic?
- ▶ What do we still need to learn?
- ▶ Where can we go to collect more information?
- ▶ What can we create ourselves?
- ▶ What are different ways we can tell our story or share our information through varied media?
- ▶ How can we refine or expand what we have?

Figure 1. Greek Mythology wiki



Wikis and Collaborative Learning

Wikis are effective in promoting collaborative learning within classes, between classes, among schools, with parents, and with communities.

Within Classes. Wikis work well as both whole class and small group activities. Since literature circles already contain collaborative elements, a wiki can be built for each group.

Nancy Bosch, a gifted facilitator in Kansas has used wikis for numerous classroom projects with her 4th through 6th graders. Her first wiki involved chil-

dren sharing information about Frank Lloyd Wright and the book *The Wright 3* by Blue Balliett (<http://thewright3.wikispaces.com/>). In another project called *arrpirates*, students learned about the Big" and explored pirates while reading *Peter and the Starcatchers* by Dave Berry and Ridley Pearson (<http://arrpirates.wikispaces.com/>). Young learners not only worked on their own pages, but they also linked to the work of their classmates (see Figure 2).

Between Classes. Students always enjoy communicating with other classes. The library media specialist is in a great position to coordinate activities among classes. They can examine standards across content areas that might make interesting projects. For example, history students working on projects on Ancient Rome might work with a class learning to build model bridges.

Among Schools. Collaborative relationships can be developed among schools in different parts of the country or around the world. In *The Thousand and One Flat World Tales Project*, young people write stories and provide feedback for other student authors (<http://burellenglish.wikispaces.com>).

With Parents. Parents can get involved with classroom activities through a library wiki project. For example, a project can be designed where people share ideas for places that families can visit within 100 miles of school. This type of experience allows parents to become involved with their children's computer activities.

With Community. Local community members or experts can also get involved with a wiki. A wiki can be used for a One Book, One Community Project. Local business representatives can also be asked to share experiences about starting a new enterprise or give their perspectives on local economic issues.

Wikis and Collaborative Information Inquiry

Wikis involve learners in asking increasingly sophisticated questions about

a topic. After the initial excitement about the topic and exploration of essential questions, learners begin to assimilate new information and draw inferences. This leads to reflection and additional questions. This recursive process leads to increasingly complex questions, more in-depth analysis, and deeper understandings. These abstract connections can be made more concrete for learners through the creation of wikis. Features such as hyperlinks allow contributors to share their links to pieces of information.

The WebQuest approach to inquiry-based learning can be rediscovered through the use of wikis. In the *Goofy Global News* wiki, students are introduced to an inquiry task related to real and fictional news stories, then provided with online resources and activities (<http://ggn.wikispaces.com/>). Young people add their own pages to the wiki and use the discussion tab to review the pages of their peers (see Figure 3).

The Inquiry Process. Wikis encourage learners to think about how information

Figure 2. *arrpirates* wiki

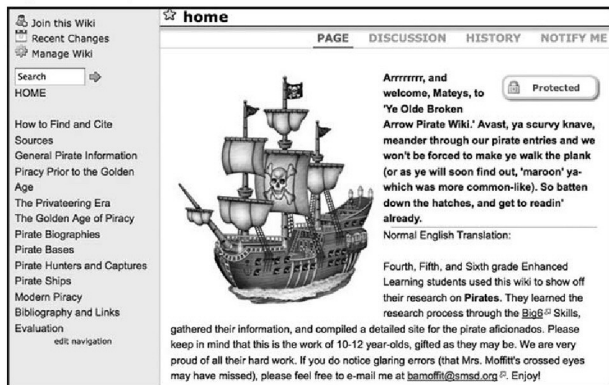


Figure 3. *Goofy Global News* wiki



can be organized to maximize understanding. For example, wikis can use alphabetical, chronological, hierarchical, geographical, or thematic approaches. Some people use outlines or visual maps (i.e., cluster map, flowchart, mindmap) for organization. Others design around regional locations, events, characters, key words, genres, categories, or other ways of thinking about a topic. Another approach is to focus organization around essential questions or problems.

The CSF: Cemetery Scene Investigation

wiki (<http://csi.wikispaces.com/>) and the *Weathering* wiki (<http://weathering.wikispaces.com/>) show how young people used wikis to organize and synthesize information during the inquiry process. Students recorded GPS coordinates, uploaded digital images, and wrote scientific and historical information about graves in their local cemetery. They also conducted research on burials. They finished by creating a Web site for the final project.

Collaborative Learning. Wikis allow learners to participate in a project larger

than their own. Participants can learn from each other and expand their thinking about a topic by working as a team. In addition, it's easy for them to go back and track who did what and when.

In the *Civil War Literature* wiki, participants begin by focusing on a historical fiction book set during the American Civil War (<http://civilwarlit.wikispaces.com/>). Once they have developed the informational wiki pages on their book, they started looking for connections with other Civil War themed books and found ways to connect their ideas and content to work created by others. For instance, if two books are about medicine of the Civil War, students collaborated on a single page rather than duplicating efforts. Participants were encouraged to connect with young people at other schools (see Figure 4).

Figure 4. *Civil War Literature* wiki

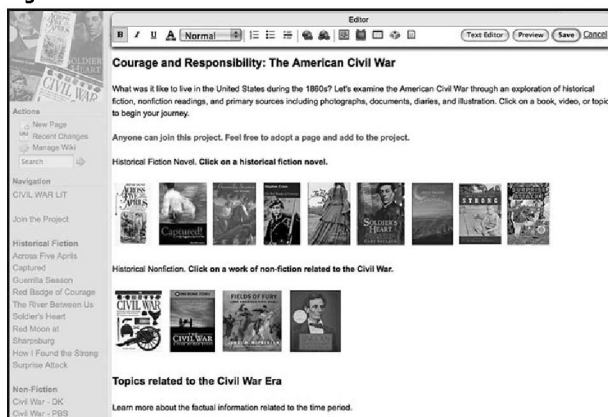
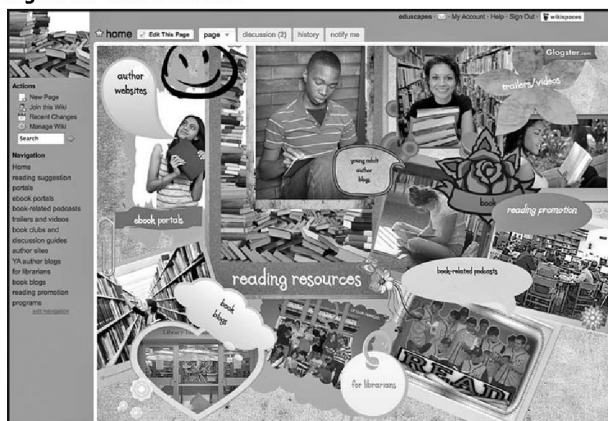


Figure 5. *Book Leads* wiki



Wikis in the Library Media Center

In addition to student-produced wikis, library media specialists are using wikis as part of library programs and professional development activities. For instance, Joyce Valenza's *Book Leads* (<http://bookleads.wikispaces.com/>) is a place where teacher librarians can share information about reading resources and ideas (see Figure 5).

Many free and low cost services are available for creating wikis. Web sites without advertising should be considered when choosing wikis for young people. Ads can be distracting and sometimes link to inappropriate sites for these young learners. *Wikispaces* is a site that currently provides ad-free wikis for educators (<http://www.wikispaces.com/site/for/teachers>).

Educators can learn more about wikis by exploring the online workshop, *Wiki World*, by the authors of this article (<http://eduscapes.com/sessions/wiki/>).◀

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